UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,644	03/20/2002	Claus Hillermeier	32860/000282/US	7432

30596	7590	12/07/2005	

HARNESS, DICKEY & PIERCE, P.L.C.
P.O.BOX 8910
RESTON, VA 20195

EXAMINER
GUILL, RUSSELL L

ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/088,644	HILLERMEIER ET AL.
	Examiner	Art Unit	
	Russell L. Guill	2123	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 October 2005</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-43</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-43</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>20 March 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 7-05)   Office Action Summary   Part of Paper No./Mail Date 20051005

DETAILED ACTION

1. This action is in response to an <u>Amendment</u> filed October 5, 2005. Claims 1 – 43 have been examined. Claims 1 – 43 have been rejected. This action is non-final.

Response to Remarks

2. As an initial matter, the Examiner would like to respectfully thank the Applicant for providing information that assisted in the examination process.

3. Regarding claims 1-11 and 14-22 rejected under 35 USC § 101, Applicant's arguments have been fully considered and are persuasive. Accordingly, the rejections are withdrawn.

4. Regarding independent claims 1, 12 and 13 rejected under 35 USC § 102, Applicant's arguments have been considered but are moot in view of new ground(s) of rejection. Since the independent claims are given new grounds of rejection, the rejections of the dependent claims are also moot.

Claim Objections

5. Claims 8, 19, 29, and 40 are objected to because of the following informalities: The claims recite the phrase, "an neural network". The phrase should be "a neural network". Appropriate correction is required.

6. Claim 12 is objected to because of the following informalities:

    6.1.   The claim recites the phrase, "a function depends on parameters and setting

constant." The phrase appears to have a minor grammatical error. For the purpose

of claim examination, the phrase is interpreted as, "a function depends on

parameters and setting constant<u>s</u>." Please note that this interpretation is needed to

avoid an issue with antecedent basis in the last limitation of the claim. Appropriate

correction is required.

    6.2.   The last limitation recites the phrase, "the processor." It appears that this

refers to the preceding "processor unit." Reference to the previous limitation should

remain consistent to avoid any possible confusion or antecedent issues.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions
> and requirements of this title.

8. Claim 13 rejected under 35 U.S.C. 101 because the claimed invention is directed to

non-statutory subject matter. The computer program product of the claim

encompasses a simple listing of source code, which is non-statutory.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. **Claims 1-3, 5-7, 9-13, 16-18, 20-24, 26-28, 30-35, 37-39 and 41-43** are rejected under 35 U.S.C. 103(a) as being unpatentable over Microsim ("MicroSim Pspice A/D & Basics+", June 1997) in view of Croix (U.S. Patent No. 6,327,557).

11.1.1. The art of Microsim is directed to the PSpice circuit simulation software (<u>page 1-2</u>).

> **11.1.1.1.** One feature of the Spice simulator that is described in Microsim is the use of device models that have parameters (setting constants) wherein the parameters appear to be used in device model equations internal to the device model (page 1-10). Although this feature is not relied upon in this action, the internal device model equations represent results of evaluations that were stored, and then used in simulations when the device is included in a circuit. The output of the device would depend on input parameters such as a voltage at various nodes, and setting constants such as the model parameters.

11.1.2. The art of Croix is directed to building a circuit characterization cell for use in a Spice circuit simulator (**column 1, lines 1 – 65; and column 2, lines 1 – 16**). In summary, Croix describes simulating a circuit at multiple values of input parameters, and storing the resulting output values along with the input parameters in a lookup table. Croix then builds a Spice cell with the lookup table for use in a Spice simulation. During Spice simulation, the cell can simply take the input values to the cell and interpolate an output value (**column 5, lines 2-65**). This simulation process has the advantage that cells of the circuitry are characterized with higher speed relative to previous techniques.

11.1.3. The art of Microsim and the art of Croix are analogous art because they

are both directed to circuit simulation using the Spice simulation software.

11.2.   Regarding claim 1:

11.2.1. Microsim appears to teach:

11.2.2. A method for simulation of a technical system (**page 1-2, section "What is**

Pspice A/D), in which a function depends on parameters and on setting

constants (**page 4-4, Example at the top of the page**).

> **11.2.2.1.**   Regarding (**page 4-4, Example at the top of the page**); it would
>
> have been obvious that the subcircuit netlist is a function that has parameters
>
> of in, out and agnd, and setting constants of c1val, c2val, r1val, r2val and
>
> gain.   Also, in the line labeled EAMP1, the value of the output
>
> (V(AGND,N1)*GAIN) depends on the parameters AGND and N1 (from the
>
> function V(AGND,N1)), and the setting constant GAIN.

11.2.3. Determining a result in the form of an influence of the parameters on the

technical system, as a function of the parameters (**page 4-4, Example at the top of**

the page).

> **11.2.3.1.**   Regarding (**page 4-4, Example at the top of the page**); it would
>
> have been obvious that the subcircuit netlist is a function that has parameters,

and produces a result that is a function of the parameters. Further, in the line labeled EAMP1, the result V(AGND,N1) is determined as a function of the parameters AGND and N1.

11.2.4. Temporarily storing a result (**page 4-4, Example at the top of the page**);

> **11.2.4.1.** Regarding (**page 4-4, Example at the top of the page**); since the subcircuit model is processed by the SPICE simulation software in a computer, it would have been obvious that the output of the result V(AGND,N1) in the line labeled EAMP1 is temporarily stored in a computer memory.

11.2.5. Simulating the technical system on the basis of the result and of setting constants (**page 4-4, Example at the top of the page**);

> **11.2.5.1.** Regarding (**page 4-4, Example at the top of the page**); since the subcircuit model is processed by the SPICE simulation software in a computer, it would have been obvious that the output of the result V(AGND,N1) in the line labeled EAMP1 is temporarily stored in a computer memory, then multiplied by the setting constant GAIN, and the value is used in the simulation of a technical system.

11.2.6. Microsim does not specifically teach:

11.2.7. Determining a result in the form of an influence of the parameters on the technical system, as a function of parameters and on the basis of a request to an external source.

11.2.8. Croix appears to teach:

11.2.9. Determining a result in the form of an influence of the parameters on the technical system (**figure 7; it would have been obvious that response time is determined as a function of the parameters: input transition time and capacitive load**), as a function of parameters and on the basis of a request to an external source (**figure 7; and column 5, lines 2 – 50; and column 6, lines 44-67; and columns 7 – 8; it would have been obvious that since Spice is executed to obtain characterization values for a circuit cell using parameters, and the cell characterization values are stored for later use in a Spice circuit simulation, that the parameters are used to calculate a result on the basis of a request to an external source**).

11.2.10. The motivation to use the art of Croix with the art of Microsim would have been the benefits recited in Croix that cells of the circuitry are characterized with both higher speed and higher accuracy relative to previous techniques (**column 2, lines 10-16**).

11.2.11. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Croix with the art of Microsim to obtain the claimed invention.

11.2.12. **Regarding claim 2:**

11.2.13. Microsim appears to teach designing the technical system on the basis of the simulation (**page 1-2, section "What is PSpice A/D?", especially "software-based breadboard of your circuit that you can use to refine your design"**).

11.2.14. **Regarding claims 3, 24 and 35:**

11.2.15. Microsim appears to teach that the design process includes a change to the technical system (**page 1-2, section "What is PSpice A/D?", especially "software-based breadboard of your circuit that you can use to *refine* your design"; it would have been obvious that refining a design is a change**).

11.2.16. **Regarding claims 5, 16, 26 and 37:**

11.2.17. Croix appears to teach that the influence of each of a plurality of

sets of parameters on the technical system is determined by checking the external

source, and wherein the result of this check is temporarily stored (<u>column 5,

lines 7-26; and column 4, lines 47-63</u>).

11.2.18. Regarding claims 6, 17, 27 and 38:

11.2.19. Croix appears to teach that an additional influence is determined

on the basis of temporarily stored results (<u>figure 7; and column 9, lines 55-67,

and column 10, lines 1-35; and column 4, lines 47-63; it would have been

obvious that response times are determined via interpolation of stored results</u>).

11.2.20. Regarding claims 7, 18, 28 and 39:

11.2.21. Croix appears to teach that the additional influence is determined

by interpolation (<u>column 6, lines 8-21; and figure 7; and column 9, lines 55-67,

and column 10, lines 1-35; and column 4, lines 47-63; it would have been

obvious that response times are determined via interpolation of stored results</u>).

11.2.22. Regarding claims 9, 20, 30 and 41:

11.2.23.   Microsim does not specifically teach that the external source is at

least one of a simulator and an experiment.

11.2.24.   Croix appears to teach that the external source is a simulator

(**column 5, lines 8-27; the simulator Spice is used to calculate characterization**

values).

11.2.25.   **Regarding claims 10, 21, 31 and 42**:

11.2.26.   Microsim does not specifically teach that the simulation is carried

out using a plurality of results, without the external source.

11.2.27.   Croix appears to teach that the simulation is carried out using a

plurality of results, without the external source (**figure 9; and column 5, lines 8-**

27).

11.2.28.   **Regarding claims 11, 22, 32 and 43**:

11.2.29.   Microsim appears to teach determining, from the simulation of the

technical system, the sensitivity of sets of parameters to changes in the setting

constants (**pages 12-2 and 12-3, section Parametric Analysis; and page xiii,**

Chapter 13 Monte Carlo and Sensitivity/Worst-Case Analyses; and page 13-33,

section Sensitivity Analysis).

11.2.29.1. Regarding (**pages 12-2 and 12-3, section Parametric Analysis; and**

page xiii, Chapter 13 Monte Carlo and Sensitivity/Worst-Case Analyses;

and page 13-33, section Sensitivity Analysis); it would have been obvious to

determine, from the simulation of the technical system, the sensitivity of sets

of parameters to changes in the setting constants.

11.2.30.   **Regarding claim 12:**

11.2.31.   Microsim appears to teach:

11.2.32.   an arrangement for simulation of a technical system (**page 1-2,**

section "What is PSpice A/D").

11.2.33.   A processor unit wherein, a function depends on parameters and

setting constant (**page 4-4, Example at the top of the page**), wherein the

processor unit is adapted to determine a result in the form of an influence of the

parameters on the technical system as a function of a set of parameters (**page 4-4,**

Example at the top of the page).

11.2.33.1. Regarding (**page 4-4, Example at the top of the page**); it would

have been obvious that the subcircuit netlist is a function that has parameters

of in, out and agnd, and setting constants of c1val, c2val, r1val, r2val and

gain, and determines a result in the form of an influence of the parameters on

the technical system as a function of a set of parameters. It also would have

been obvious that a processor unit is used, since Spice simulations are

executed on a computer. Further, in the line labeled EAMP1, the result

V(AGND,N1) is determined as a function of a set of parameters. The result

V(AGND,N1) is then multiplied by a setting constant, gain.

11.2.34. A memory, adapted to temporarily store a result (**page 4-4, Example at the top of the page**);

> **11.2.34.1.** Regarding (**page 4-4, Example at the top of the page**); since the
>
> subcircuit model is processed by the SPICE simulation software in a
>
> computer, it would have been obvious that the output of the subcircuit is
>
> temporarily stored in a computer memory. Also, it would have been obvious
>
> that the result V(AGND,N1) is temporarily stored in a computer memory.

11.2.35. A processor is adapted to simulate the technical system on the basis

of a result and of the setting constants (**page 4-4, Example at the top of the page**).

11.2.35.1. Regarding (**page 4-4, Example at the top of the page**); in the

subcircuit model, a simulation is provided based on a result (for example, the

voltage between the nodes AGND and N1 in the line labeled EAMP1), and

setting constants (for example, gain in the line labeled EAMP1).

11.2.36.   Microsim does not specifically teach:

11.2.37.   Determining a result in the form of an influence of the parameters

on the technical system, as a function of parameters and on the basis of a request

to an external source.

11.2.38.   Croix appears to teach:

11.2.39.   Determining a result in the form of an influence of the parameters

on the technical system (**figure 7; it would have been obvious that response**

time is determined as a function of the parameters: input transition time and

capacitive load), as a function of parameters and on the basis of a request to an

external source (**figure 7; and column 5, lines 2 – 50; and column 6, lines 44-67;**

and columns 7 – 8; it would have been obvious that since Spice is executed to

obtain characterization values for a circuit cell from input parameters, and the

cell characterization values are stored for later use in a Spice circuit

simulation, that the parameters are used to calculate a result on the basis of a

request to an external source)

11.2.40.   The motivation to use the art of Croix with the art of Microsim

would have been the benefits recited in Croix that cells of the circuitry are

characterized with both higher speed and higher accuracy relative to previous

techniques (**column 2, lines 10-16**).

11.2.41.   Therefore, as discussed above, it would have been obvious to the

ordinary artisan at the time of invention to use the art of Croix with the art of

Microsim to obtain the claimed invention.

11.2.42.   Regarding claim 13:

11.2.43.   A computer program product, adapted to cause a processor unit to

simulate a technical system (**page 1-2, section "What is Pspice A/D**), wherein a

function depends on parameters and setting constants (**page 4-4, Example at the

top of the page**).

11.2.44.   A first program segment, adapted to cause the processor unit to

determine a result, in the form of an influence of the parameters on the technical

system, as a function of a set of parameters (**page 4-4, Example at the top of the

page**).

   11.2.44.1. Regarding (**page 4-4, Example at the top of the page**); it would

   have been obvious that the subcircuit netlist is a function that has parameters

   of in, out and agnd, and setting constants of c1val, c2val, r1val, r2val and

   gain, and determines a result in the form of an influence of the parameters on

the technical system as a function of a set of parameters. Further, in the line labeled EAMP1, the result V(AGND,N1) is determined as a function of a set of parameters.

11.2.45. A second program segment, adapted to cause the processor unit to cause the result to be temporarily stored (**page 4-4, Example at the top of the page**).

> **11.2.45.1.** Regarding (**page 4-4, Example at the top of the page**); since the subcircuit model is processed by the SPICE simulation software in a computer, it would have been obvious that the output of the subcircuit is temporarily stored in a computer memory. Also, it would have been obvious that the result V(AGND,N1) is temporarily stored in a computer memory.

11.2.46. a third program segment, adapted to cause a processor unit to simulate the technical system on the basis of the result and of the setting constants (**page 4-4, Example at the top of the page**).

> **11.2.46.1.** Regarding (**page 4-4, Example at the top of the page**); in the subcircuit model, a simulation is provided based on a result (for example, the voltage between the nodes AGND and N1 in the line labeled EAMP1; V(AGND,N1)), and setting constants (for example, gain in the line labeled EAMP1).

11.2.47. Microsim does not specifically teach:

11.2.48. a first program segment, adapted to cause the processor unit to determine a result, in the form of an influence of the parameters on the technical system, as a function of parameters *and on the basis of a request to an external source.*

11.2.49. Croix appears to teach:

11.2.50. a program segment, adapted to cause the processor unit to determine a result, in the form of an influence of the parameters on the technical system (**figure 7; it would have been obvious that response time is determined as a function of the parameters: input transition time and capacitive load**), as a function of parameters and on the basis of a request to an external source (**figure 7; and column 5, lines 2 – 50; and column 6, lines 44-67; and columns 7 – 8; it would have been obvious that since Spice is executed to obtain characterization values for a circuit cell, and the cell characterization values are stored for later use in a Spice circuit simulation, that the parameters are used to calculate a result on the basis of a request to an external source**)

11.2.51. The motivation to use the art of Croix with the art of Microsim would have been the benefits recited in Croix that cells of the circuitry are characterized with both higher speed and higher accuracy relative to previous techniques (**column 2, lines 10-16**).

11.2.52.   Therefore, as discussed above, it would have been obvious to the

ordinary artisan at the time of invention to use the art of Croix with the art of

Microsim to obtain the claimed invention.

11.2.53.   **Regarding claims 23 and 34**:

11.2.54.   Microsim appears to teach that a processor unit is further adapted

to design the technical system on the basis of the simulation (**page xxvi, the**

unlabeled figure at the bottom of the page, the MicroSim PSpice Optimizer is

shown as modifying the MicroSim PspiceA/D simulator; it would have been

obvious that the optimizer is adjusting values of a technical system, which is

performing design; and page xxviii, MicroSim PSpice Optimizer User Guide

paragraph).

11.2.55.   **Regarding claim 33**:

11.2.56.   Microsim appears to teach a computer program product including

a computer readable medium (**page xxxiii, MicroSim's evaluation CD-ROM**).

11.3. **Claims 4, 14-15, 25 and 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over Microsim ("MicroSim Pspice A/D & Basics+", June 1997) in view of Croix (U.S. Patent 6,327,557) as applied to claims **1-3, 5-7, 9-13, 16-18, 20-24, 26-28, 30-35, 37-39 and 41-43** above, and further in view of common knowledge in the art.

11.3.1. Microsim as modified by Croix teaches a method for simulation of a technical system, as recited in claims **1-3, 5-7, 9-13, 16-18, 20-24, 26-28, 30-35, 37-39 and 41-43** above.

11.3.2. Regarding claims 4, 14, 15, 25 and 36:

11.3.3. Microsim does not specifically teach redetermining the influence of the parameters on the technical system by accessing the temporarily stored result.

11.3.4. Official Notice is taken that it was old and well known in the art at the time of invention to temporarily store a result for reuse. The motivation would have been the knowledge of the ordinary artisan that saving a result for later reuse saves the computing expense of re-computing a result.

11.3.5. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Croix and common knowledge in the art with the art of Microsim to obtain the claimed invention.

11.4. **Claims 8, 19, 29 and 40** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Microsim ("MicroSim Pspice A/D & Basics+", June 1997) in view

of Croix (U.S. Patent 6,327,557) as applied to **claims 1-3, 5-7, 9-13, 16-18, 20-24, 26-28,**

30-35, 37-39 and 41-43 above, and further in view of Rai (U.S. Patent Number

6,606,612).

11.4.1. Microsim as modified by Croix teaches a method for simulation of a

technical system, as recited in **claims 1-3, 5-7, 9-13, 16-18, 20-24, 26-28, 30-35, 37-**

39 and 41-43 above.

11.4.2. Regarding claims 8, 19, 29 and 40:

11.4.3. Microsim does not specifically teach that an additional influence is

determined from the results using an neural network.

11.4.4. Rai appears to teach determining an influence from results using an

neural network (*column 2, lines 50-55*).

11.4.5. The motivation to use the art of Rai with the art of Microsim and Croix

would have been the benefit recited in Rai that significant cost savings have been

realized by using neural nets to interpolate between measurements (*column 2,*

lines 50-55).

11.4.6. Therefore, as discussed above, it would have been obvious to the ordinary

artisan at the time of invention to use the art of Croix and the art of Rai with the

art of Microsim to produce the claimed invention.

11.5.   Examiner's Note: Examiner has cited particular columns and line numbers in

the references applied to the claims above for the convenience of the applicant.

Although the specified citations are representative of the teachings of the art and are

applied to specific limitations within the individual claim, other passages and

figures may apply as well. It is respectfully requested from the applicant in

preparing responses, to fully consider the references in their entirety as potentially

teaching all or part of the claimed invention, as well as the context of the passage as

taught by the prior art or disclosed by the Examiner.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to the

applicant's disclosure:

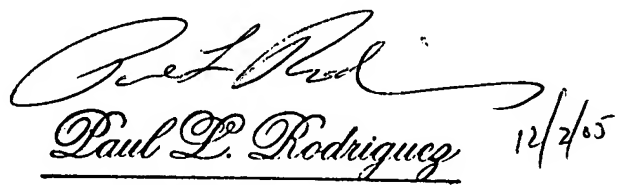**12.1.**   Tyler (U.S. Patent 5,774,382) A table based model of a Spice cell.

13. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Russell L. Guill whose telephone number is 571-272-

7955. The examiner can normally be reached on Monday – Friday 10:00 AM – 6:30

PM.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300. Any

inquiry of a general nature or relating to the status of this application should be

directed to the TC2100 Group Receptionist: 571-272-2100.

15. Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov.

Should you have questions on access to the Private PAIR system, contact the

Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Russ Guill
Examiner
Art Unit 2123

RG

Paul L. Rodriguez   12/2/05

Primary Examiner
Art Unit 2125